

<b>DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT</b> <b>Housing - Federal Housing Commissioner</b>		<b>Series and Series Number:</b> <b>MATERIALS RELEASE NO: 1321</b>				
<b>TO: DIRECTORS, SINGLE FAMILY HOCs</b> <b>DIRECTORS, MULTIFAMILY HUBs</b>		<b>ISSUE DATE</b> June 20, 2006				
		<b>REVIEW DATE</b> June 20, 2009				
<b>SUBJECT:</b> <table border="0"> <tr> <td style="vertical-align: top;">1.</td> <td style="vertical-align: top;"> <b>Product</b> C3 Membrane Roofing System            (C3 Illusions, C3 Evolution, C3, C3 Plus, and C3 Fleece Back)         </td> </tr> <tr> <td style="vertical-align: top;">2.</td> <td style="vertical-align: top;"> <b>Name and address of Manufacturer</b>            Cooley, Inc.            50 Esten Avenue            Pawtucket, RI 02860         </td> </tr> </table>			1.	<b>Product</b> C3 Membrane Roofing System (C3 Illusions, C3 Evolution, C3, C3 Plus, and C3 Fleece Back)	2.	<b>Name and address of Manufacturer</b> Cooley, Inc. 50 Esten Avenue Pawtucket, RI 02860
1.	<b>Product</b> C3 Membrane Roofing System (C3 Illusions, C3 Evolution, C3, C3 Plus, and C3 Fleece Back)					
2.	<b>Name and address of Manufacturer</b> Cooley, Inc. 50 Esten Avenue Pawtucket, RI 02860					

Data on the nonstandard product described herein have been reviewed by the Department of Housing and Urban Development (HUD) and determination has been made that it is considered suitable from a technical standpoint for the use indicated herein. This Release does not purport to establish a comparative quality or value rating for this product as compared to standard products normally used in the same manner.

This Materials Release cannot be used as an indication of endorsement or approval by HUD of the described product, and any statement or representation, however made, indicating such approval or endorsement by HUD is unauthorized. See Code 18, U.S.C. 709.

Any reproduction of this Release must be in its entirety.

**USE:** Roofing system for nominally flat to vertical slopes.

**DESCRIPTION:**

C3 Membrane Roofing System consists of a membrane, mechanical fasteners, insulation board, and, where required, vapor retarder. The membrane is a polyvinyl chloride (PVC) and Elvaloy® coated, polyester laminated fabric extrusion with a minimum thickness of 40 mils. Mechanical fasteners are utilized to secure the membrane to the deck. The membrane is welded together with a heat welding machine. No seam sealer is recommended on the seams by Cooley Building Products. (Cooley).

**MATERIALS:**

All roofing system materials shall be supplied by Cooley or its licensed roofing contractor. If the contractor supplies any material, such as nailer, these materials must be approved in writing by Cooley. Data on physical properties of the membrane (tensile strength, elongation, creep, brittleness, etc.) are on file at HUD Headquarters and Cooley Headquarters.

## SINGLE PLY ROOFING INSTITUTE WIND DESIGN GUIDE

### FIRE AND WIND CLASSIFICATION:

Mechanically fastened and fully adhered roofing systems shall be designed to resist wind uplift forces as determined in the Wind Design Guide for Mechanically Fastened Single-Ply Roofing Systems published by the Single Ply Roofing Institute (SPRI).

Fire Classification shall be in accordance with Underwriters Laboratories, Inc. (UL), or Factory Mutual Engineering Corporation (FM) construction details. To qualify for fire rating and uplift resistance, the system shall be in the current UL or FM Listing.

### INSTALLATION:

1     General:

All C3 Membrane roofing materials shall be installed by Cooley approved roofing contractors. Installation procedures shall be in accordance with the manufacturer's specifications and details.

2.     Substrate Preparation:

Preparation of the substrate shall comply with the latest edition of the Cooley Specifications. Design of the roof deck is the responsibility of the owner or the owner's architect/engineer.

3.     Insulation:

Use only the insulation types indicated in the Cooley (Cooley) Insulation Guide or as approved by Cooley. Place the insulation board over the prepared substrate with all joints butted tight, and mechanically fasten with CEM fasteners using a minimum of five (5) plates and screws per 4' x 8' board. Adhere to insulation manufacturer fastening requirements if more stringent than CEM. Make sure the insulation fasteners are tight.

4.     Membrane Installation:

All C3 Membrane Roofing Systems, including insulation shall be installed by a Cooley approved applicator or original equipment manufacturer. Membrane installation, including CEM placing, bonding, lap splicing, perimeter attachment, flashing, construction closure, walkways and other work to provide a watertight roofing system, shall comply with CEM Specifications, dated April 1993.

INSPECTION:

A designated representative of Cooley shall make inspections of the installation at the following intervals: (1) prior to delivery of materials – to accept or reject the roof deck to which the roofing system is to be applied; (2) during the installation – to inspect and approve the installation techniques and methods; and (3) upon completion – to give final approval to the installation.

MANUFACTURING LOCATIONS:

The product covered under this MR will be produced at the following plant(s):

Cooley Incorporated  
50 Esten Avenue  
Pawtucket, RI 02860

Cooley Incorporated  
861 Quality Drive  
Lancaster, SC 19720

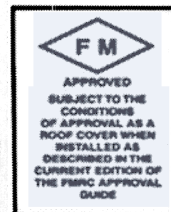
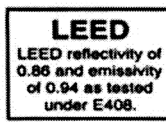
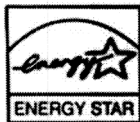
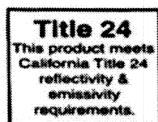
O'Sullivan Films  
1944 Valley Avenue  
Winchester, VA 22601

CERTIFICATION:

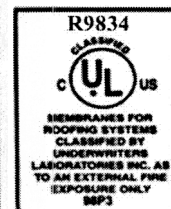
**Cooley** / *Building Products*  
WHERE CHEMISTRY MAKES THE DIFFERENCE

**C3™ PVC 60 Mil - White**

**PVC Thermoplastic Roofing Membrane**



	Solar Reflectance	Initial 0.86 Weathered Pending
	Thermal Emittance	0.86 Pending
	Rated Product ID	0792-0001
	Licensed Manufacturer ID	0792
Classification		Production Line
Cool Roof Rating Council ratings are determined for a fixed set of conditions, and may not be appropriate for determining seasonal energy performance. The actual effect of solar reflectance and thermal emittance on building construction may vary.		
Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating normal procedures.		



**Roll Dimensions:**

78 " W x 100' L

**Roll Weight:**

260 lbs

**WARRANTY:**

A ten-year warranty shall be given to the owner by Cooley to read as follows:

Cooley Engineered Membranes, Inc. (Cooley) hereby warrants to the owner of its roofing system, installed by an applicator approved by Cooley, that the system will remain in a watertight condition and retain at least 80 percent of its specified aged thermal resistance value, if applicable, for a period to ten years from the date of installation. In the event of failure of the aforesaid system to function as the warranted above, whether on account of normal processes of wear and aging, Cooley will make, or cause to be made, such repairs and maintenance necessary to enable the system to perform as warranted above. The repair obligations of this warranty are limited to the owner's original cost of installation of the C3 Membrane Roofing System.

Cooley's obligations to repair or maintain the system under this warranty shall not be in force or effect unless: (1) Cooley is notified of any failure of the system covered by the warranty within thirty (30) days following such failure; (2) the system is installed by an applicator approved by Cooley; and (3) no alternations or repairs to the system are made without the prior written approval of Cooley as to the extent, methods and materials used.

Cooley assumes no liability for any failure of the systems resulting from winds, which exceed the design wind, Acts of God, including without limitation, lightning or earthquake; nor for any failure of the systems resulting from fire of any origin or cause, nor for any failure of the product caused by structural defects of the buildings on which the system is applied nor from deliberate misuse of the product; nor for any failure of the systems caused by leakage or any other cause from an adjacent structure.

**MANUFACTURER'S RESPONSIBILITIES:**

Issuance of this Materials Release (MR) commits the manufacturer to fulfill, as a minimum, the following:

- 1 Produce, label and certify the material, product or system in strict accordance with the terms of this MR.
2. Provide necessary corrective action, in a timely manner for all cases of justified complaint, poor performance or failure reported by HUD.
3. When requested, provide the FHA Standards, Office of Manufactured Housing Programs, HUD Headquarters, with a representative list of properties in which the material, product or system has been used, including complete addresses or descriptions of locations and dates of installation.

4. Inform HUD in advance of changes in production facilities, methods, design of the product, company name, ownership or mailing address.

**EVALUATION:**

This MR shall be valid for a period of three years from the date of initial issuance or most recent renewal or revision, whichever is later. The holder of this MR shall apply for a renewal or revision 90 days prior to the Review Date printed on this MR. Submittals for renewal or revision shall be sent to:

U. S. Department of Housing and Urban Development  
FHA Standards, Office of Manufactured Housing Programs  
451 7<sup>th</sup> Street, SW, Room 9168  
Washington, DC 20410-8000

Appropriate User Fee shall be sent to:

U. S. Department of Housing and Urban Development  
Miscellaneous Income – Technical Suitability of Products Fees  
Bank of America  
P. O. Box 198762  
Atlanta, GA 30384-8762

The holder of this MR may apply for revision at any time prior to the Review Date. Minor revisions may be in the form of a supplement to the MR.

If the Department determines that a proposed renewal or supplement constitutes a revision, the appropriate User Fee for a revision will need to be submitted in accordance with Code of Federal Regulations 24 CFR 200.934, "User Fee System for the Technical Suitability of Products Program," and current User Fee Schedule.

**CANCELLATION:**

Failure to apply for a renewal or revision shall constitute a basis for cancellation of the MR. HUD will notify the manufacturer that the MR may be canceled when:

conditions under which the document was issued have changed so as to affect production of, or to compromise the integrity of the accepted material, product, or system,

2. the manufacturer has changed its organizational form without notifying HUD, or
3. the manufacturer has not complied with responsibilities it assumed as a condition of HUD's acceptance.

However, before cancellation, HUD will give the manufacturer a written notice, of the specific reasons and the opportunity to present views on why the MR should not be canceled. No refund of fees will be made on a canceled document.

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This Materials Release is issued solely for the captioned firm and is not transferable to any person or successor entity.

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